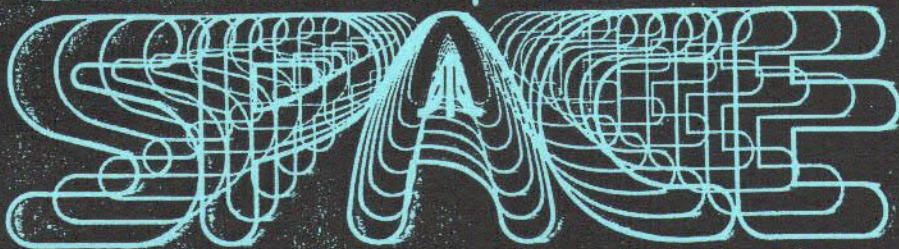


Saint Paul ATARI Computer Enthusiasts



An independent computer user group

NOVEMBER 1986

This month's meetings:

SPACE
MAST

FRIDAY, NOVEMBER 14
FRIDAY, NOVEMBER 21

At the Falcon Heights Community Center 2077 Larpenteur Ave W

*** ** SPACE ELECTIONS and SWAP MEET *** **

Bruce Haug...President	774-6226	Bob Rhode....Editor	222-3593
Jim Schulz...Vice-Pres	537-5442	Bob Siede....Treasurer	489-3982
Frank Haug...Disk Lib.	774-6226	Bob Floyd....Secretary	484-7576
Jim Siede....Paper/Educational Librarian	489-3982		
SPACE/TAIG Bulletin Board...522-2687			

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IN THIS ISSUE:

SOFTWARE REVIEWS
for 3-Bits and STs

ICD CONFERENCE
continued from October

BY LAWS amendments

MAGIC SAC
Macintosh emulator

Plus all the monthly columns

Bytes from the Pres

November election time is here! Along with that comes changes to the By Laws, read about them later in this newsletter.

The Minneapolis Childrens Hospital project is coming along fine. Come to the meeting for a report on how the computer presentation went on Fri Nov. 7th. The St. Paul Childrens Hospital is still being worked on, more info at the meeting.

```
*****  
*   SWAP MEET   *  
*   NOV 14th   *  
*   MEETING    *  
* After Elections *  
*****
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Please at the Swap Meet bring only original programs with Doc's.

The Nominations committee has turned in a slate of officers to be voted on, so now you can relax come to the meeting, VOTE, and not worry about being elected. Self nomination is in order if you would like to add your name to the list.

see you at the meeting!!

The Pres

PS The Bulk Disks are ordered! Hope they arrive by meeting date.

DOM

Well I could sure use some submissions. This month the programs won't all make it in the newsletter. I'll be adding more after this is submitted.

The programs on the November 1986 DOM.

1. POWRSTAR.COM - A Pre-release demo of a graphic adventure. Looks good.
2. SECTCOMP - compares files and lists each byte that is different.
3. TXTSPLIT - Splits large text files into more manageable sizes.
4. FC256.DOC - doc for #6.
5. FCCARD - a quick reference card for paper clip.
6. FC256XE.BAS - Allows paperclip to use the full 256k of an expanded machine.
7. SPELLFIX.BAS - fix for compute's speed script.
8. YATZEE - A classic dice game.
9. SLOTS - One armed bandit any one?

More programs will be added before the meeting. (I hope)

Thanks for all the past submissions. And please donate some programs or else the dom will cease to exist.

Proposed By Law changes

ARTICLE V MEETINGS

Section 6. MINNESOTA ATARI ST (MAST) is a SIG of SPACE.

Section 7. All SIG's are required to Elect a Chairman or Co-Chairs, subject to final approval of the executive board.

Section 8. Club DOM's will be sold at club meetings by the Designated DOM Librarian, and the price of this software will be set by the SPACE - MAST executive board.

ARTICLE ??? GENERAL

Section 1. No SPACE - MAST Officer or member is paid for duties preformed. With prior Executive Board approval "out of pocket expenses" are paid upon the submitting of a bill or sales slip to the Treasurer at an Executive Board Meeting.

Section 2. No SPACE - MAST Officer is PAID. Compensation is (1) free DOM each month, additional DOM's are provided when there is more then one disk per month, IF the Officer provides the DOM Librarian with the blank media. SPACE - MAST Officers are not required to pay membership dues, upon termination of office, dues are required. These dues will be calculated on a per month basis if a full term is not served.

Section 3. No SPACE - MAST member shall sell or give SPACE - MAST Public Domain software to any other person, bulletin board, or Computer Club. All requests for SPACE - MAST public domain software will be authorized by the designated DOM librarian or Executive Board.

Section 4. SPACE - MAST does not sell DOM's to Non-Members. Other computer clubs may trade with SPACE - MAST on a one for one basis, disk for disk or program for program.

Section 5. Any member found to be in violation of these By Laws will be expelled from the club. No reimbursement of unused dues will be made.

V.P. Notes
By Jim Schulz

November is here and it is election time in more ways than one. I am writing this on election day whatever day it is this year and this month SPACE holds its elections, too. The only difference between the election day's elections and SPACE's elections is that our elections for officers are already pretty much decided. But maybe that's the way all elections are. This month we will be electing a new president, vice president, secretary, and treasurer or should I say reelecting. All offices have nominees so your only duty is to come and vote. If you would still like to run, just come to the meeting and throw your hat in the ring. Just one final point, you don't have to fear the election month meeting. Some groups announce elections and have one-fourth of the membership show up for fear that they will get coerced into an office. At SPACE, all the arm twisting is done and all you have to do is agree. So come to the meeting to agree on the ballot of officers and buy something cheap at this month's swap meet. As always, the doors of the officers and phones are always open for suggestions and help. Now on to the news.....

What news???? This month is another slow month for 8 bit news. But here are some goodies which I have picked up. First of all, Atari Explorer is now available at a store near you. The editors did a very nice job with this first new issue even though some of the news is old. Hopefully the next issue will be a little bit more current. For a first issue, I like it. Atari has finally moved their magazine from the realm of propaganda to something worthwhile to read. One point which I have heard mentioned by others, Atari Explorer has done a nice job of intermixing the 8 bit and ST news and reviews as to not anger either group. The magazine is 50/50 and not seemingly slanted one way or the other. Maybe both machines can coexist in the same magazine. Next month: Issue #2, I hope.

Well, maybe both machines can't coexist???? This month, ANALOG has announced that they are starting an exclusive ST magazine. I know this piece of news doesn't belong here, but ANALOG will return to 8 bit only magazine like pre-ST days. The new ST magazine will be monthly and will be sold side by side with ANALOG. Now what will ANTIC do?????

The piece of news that I do have is that the 80 column box has been delayed again for some unearthly reason and now will not be available for Christmas. More updates on this and other 8 bit stuff will likely surface during this month's COMDEX software show the week of SPACE meeting. I will keep my eyes peeled and give you the complete rundown of the latest and greatest news at this month's meeting. Possible announcements include updated XE with 256K or 512K of memory, official announcement of the 3 1/2 inch disk drive, and maybe the possible sound upgrade with AMY sound chip. We shall see. Stay tuned.... Good stuff is coming soon to our disk library. Unknown to Frank, I am in the process of getting a super development program from Europe which runs only on the 130XE or upgraded systems(I expect). More on this next month.... I would like to belatedly thank Gordy and all of those who participated in the wordprocessing demos at the September meeting. This was probably one of the best demonstrations I have seen at our meeting and more is to come. To see part two of this series show up in December for the spreadsheets talk and hands-on demonstrations. Also, since I am thanking, I would like to thank all of those who volunteered to help with our Children's hospital project. I think this is probably one of the most important things that this club has done for the community and I and all of the club officers appreciate your support. Finally, this month in 8 Bit Xtra we will have part two of the ICD

conference. Next month, I have uncovered a part of the missing 1090 expansion box specs. More on that next month. Also somewhere else in this month newsletter is the first installment of 8 Bit Reviews. I hope you enjoy. Well, that's it for November. Remember Christmas is right around the corner and your Atari would always like a present, too. No new news on the stock sale from Atari. The offer for a prospectus still stands. I would be nice to tell the members of both groups first hand about Atari's financial status. See you at the meeting with the latest and greatest news and latest words from COMDEX. Happy computing.

8 Bit Xtra

This is the second in a series of BBS articles which I have collected for our club newsletter. This month is the second of two parts of a conference with two representatives from ICD on September 13, 1986. Next month we get to look at a part of the long lost and never released Atari 1090 expansion box hardware notes. Read and enjoy.

Jim Schulz

(Jim Woods) When I got my R-Time 8 cart. it came with dos 3.2d, what is the difference from 3.2d & 3.2b and is 3.2d the latest?

(ICD-Mike) I forget exactly... I think it has to do with BASIC XL and old OSS cart incompatibility... the cart would lock up the system when it booted up when it accessed the RTB. The other thing had to do with the way it handles input via the TIME and DATE commands... now batch files stop... overall, the differences are very minor.

(Jim Woods) Is it the latest? ga

(ICD-Mike) 3.2d is the very latest (and has been for quite a few months)

(Francis) That is go for me! I never knew why it does.

(Jerry) 1)Is the Ramdisk Battery backed..I've heard both it is and isn't; 2)How do you set the drive number of the MIO hardware or software.

(ICD-Tom) 1 -- The MIO uses a separate power supply which is the same type as used with 1050 disk drives there is not a battery back up provision unless you get a U.P.S.

(ICD-Mike) 2 -- The drive numbers (D1-D8) are set up by the MIO configuration...each drive number can be one of the following:

1. Hard drive (set partition, controller ID, and unit number)

2. RAM drive (set size)

3. Floppy drive (set actual floppy number... i.e. D4: could be floppy unit #1, but no software can tell the difference

4. Unassigned... in which case it will access the regular ID as it normally would without the MIO

(Chan Keith) Also, Jerry, I might add that the "config" pgm is resident. All you have to do is hit SELECT/RESET and up it pops! ok, ga Bryan, then Darius.

(ICD-Mike) (thanks Keith)

(BRYAN DREW) with that config prog, can i set multiple drives?

(ICD-Mike) Yes, the config assigns devices (RAM,Hard,Floppy) to all 8 drives and up to eight RAM, Hard, or floppies can be used (but the total is still a mix of any 8)

(BRYAN DREW) How about Percom dd emulation?

(ICD-Mike) The MIO RAM and Hard drives all are double density... the number of sectors are set by the config... I'm not sure I know what you're getting at.

(Darius) SpartaDOS 3.2 has trouble working with 1030 Express. Will the SpartaDOS X cartridge fix this? And any plans for a disk cache?

(ICD-Tom) It does? Could you answer that Keith?

(Chen Keith) sure...The reason 1030 Express! won't work with 3.2 is that for some reason the T: handler that comes with the XM301 modem (which is what Express!) uses and SpartaDOS don't like each other. It causes SD to lock up the first time it tries to timestamp a file. The way around that is to use the TPATCH.COM that can be found in DL2. It turns the "timestamp" vector into a simple RETURN instruction. Also, you MUST do a KEY OFF command, since Express! steals the immediate VBI, and so does SD's keyboard buffer.

(Darius) But the patch keeps the time and date from advancing. Will Sparta X allow the Xa301 handler to be used? And lastly, any plans for a disk cache?

(ICD-Mike) What do you mean by disk cache (more buffers? prereading?) ga

(Darius) Prereading.

(ICD-Mike) No, that is only possible on a multitasking environment, the Atari can't handle this without be incompatible with most software. The SDX will use more buffers however, (again) The SDX has more buffers when used with the MIO which (hold on) will make it run much faster. The Xa301 handler we will try in SDX... so far neither Keith nor I have found the conflict... I hope that it will be taken care of and fixed...

(Chen Keith) on the Express -- a new version will be out soon using a "relocatable" version of the xa301 driver. maybe that will fix the problem...

(Chen Keith) ok, bill is next.

(Bill Colburn) Ok, sorry. Anyhow, I am from an IBM environment. I would like to be able to define a random access file to SD X with key definitions, etc. Then when I read/write a record, I want SD X to take over and handle the key stuff. Am I dreaming the impossible dream?

(ICD-Mike) You mean database with "INDEX" or key files?

(Chen Keith) Mike..what he is asking is if the update of the ...

(Bill Colburn) Yes, sort of. Are you familiar with VSAM???

(Chen Keith) index and stuff is going to be "transparent" to the user..in other words, SD X will do it "automatically".

(Francis) BATCH files?

(ICD-Mike) Yes, SDX will do all key adds transparently, all you have to do is define you keys (i.e. what fields to keep it sorted by), from there you just add records (via XIO) and thats it. Other calls are:

- position within KEY (next record in same sorted manner)

- lookup record (by KEY)

- delete record

- and several others for flexibility.

(Bill Colburn) Is all this accessible from MY application program?

(ICD-Mike) Yes Bill, the calls are all from XIOs just like RENAME or DELETE.

(Bill Colburn) Sounds fantastic! How about utilities to unload and reorganize my keyed files???

(ICD-Mike) yes, after many adds and deletes, the key files become scattered throughout your disk and fill only partial sectors. A compacting (single pass) utility will read and reorganize the keys into a more compact file... the records themselves do not since it is a straight linear file with ability to remember where deleted spaces are (note that these are strictly fixed length records).

(Bill Colburn) I got my VISA card out!! How much?? (and thanks)

(ICD-Mike) The cart will be 79.95 and will be available in about 3 mos (hopefully).

(Chen Keith) sounds great! next are Remus, larry, gary, francis, Abdul.

(Bill Colburn) Fine!!!!

(Remus) Any plans to use an IF ... THEN ... ELSE to SD X? And can I config a hard drive as 5,6,and 7?

(ICD-Mike) Yes, the batch file processing will handle:

IF.. then.. else

do ... while

assignments (variables etal)

and possibly more structures (as fit and are practical. this is some of the later decisions). The Hard drive can be any drive number you want... and may be several (MIO)

(Chen Keith) mike, going to put the current directory in the prompt? Like D1:DOWNLOAD> ?

(ICD-Mike) Very probable... this is fairly easy stuff and will be finalized in a month or so.

(Chen Keith) ok..great.

(Remus) Thx

(Larry Friday) I assume then that the MIO is still a volatile (RAM) item, unless you leave the power on.

(ICD-Mike) Yes, if it must NOT crash the RAM, a UPS is the way to go. They are expensive, but battery backup is impractical since 1Meg RAM takes a lot of power (relative to CMOS 8K static RAMs)..

(Chen Keith) ok, gary then francis.

(Larry Friday) Yeah, that's what I thought too. Thanks.

(Francis) So, under BASIC, up to 8M, right? But Under ACTION, up to 16M, right? Is it correction : POINT #chan, OK-64K, 0 -255 by mult 64K.

(ICD-Tom) Mike is off temporarily again (Dang ST) but let me continue. ACTION and other languages are 16Meg.

(Francis) Tom, I noted. So for MIO, how larger for hard drive so can up yo?

Chan, I am not finish yet.

(ICD-Tom) The MIO will handle any Hard drive the SASI or SCSI controller will take... for example: you can divide a 40 Meg into 2 16 Megs (lets say D1: and D6:)..

(Francis) I guess that MIO had no limit max. size of hard drive?

(ICD-Tom) then use the last 8K as another drive unit.

(Francis) See thanks! that is all.

(Abdul) Can the Ram in a 256k MIO be upgraded to say... 1 MEG?

(ICD-Tom) Sure, but it must be done by ICD. The MIO uses special DRAM ICs not normally available and no sockets. Price will be around \$200 to upgrade.

(Abdul) ok thanx!!!

(Jerry) How much programing area will we have with the Cart and will prgs like....

(Francis) That is possible for hardware hacker can do it by himself.

(Jerry) Express be able to take advantage of the DOS in ROM and have large buffers.

(ICD-Mike) Tom is down...The SDX will take about the same amount \

(Chen Keith) want me to field that one?

(ICD-Mike) of memory as does 3.2. We'll just have to wait and see.

(Chen Keith) hmmm...same amount of memory even tho it is in a cartridge?

(ICD-Mike) The SDX still has to put much of its contents in RAM because (come on guys) because the ROM can not be activated while running normal carts or programs in the cart area... however, the command proc will be ALL in ROM... this is one of the redeeming feates of this set up... the area the old command proc used to take up will be replaced with general expansion of the kernal (or FMS).

(Jerry) Oh well it would've been nice.

(Mark(Toolworks)) will ICD sell a kit for MIO ram upgade?

(ICD-Tom) Absolutely not! Sorry Mark.

(Mark(Toolworks)) bummer!

(Francis) Mark, unless you are hardware hacker.
(Chan Keith) hehe..ok, Robert.

8 Bit Reviews
By Jim Schulz

Okay, which better game to start reviewing with than a remake of a classic. For those of you who don't know or don't own, Star Raiders is probably the best known and one of the first games available for the Atari 400 and 800 now many years ago. This space adventure/shoot'em up game was the first game that I brought for my Atari 800 now four years ago and it is still one of my favorite games. If you don't own this game, beg, borrow or steal (shame on me) to get it. This is a must buy. How he ever squeezed that much game into 8K of ROM, I'll never know. But this isn't a review of Star Raiders.

Atari, in their infinite wisdom, decided that they would produce a sequel to Star Raiders and call it you guessed it "Star Raiders II." Does it live up to the original???? Is it worth buying??? Should I buy it??? Well, I hope to answer these questions in the following review.

First off some history. Star Raiders II is not written by the original author of Star Raiders and really unless I missed something have nothing to do with the original. If you want to get technical, Atari did write a story to make it look like a continuation. Star Raiders II is actually a cleaned up version or even the original version of "The Last Starfighter", a game that the old Atari announced, but never released. Ok, Jim, but what about the game??? Give me time.....

Okay, now to the game. The premise of the game has changed. Instead of just defending space stations, you now must defend planets with a number of cities. You again have fighters which are trying to kill you. But this time they are just a bit more intelligent. If you kill two of three fighters off in a wave, the next wave will again have three fighters until all the fighters are gone. Killing these guys is not a piece of cake. And if you make it past them Well, then you have the destroyers to deal with. These ain't easy. You kill off one or two of these and then it's back for refueling. But this isn't the whole game, in addition to protecting four planets and up to three space stations, you have to destroy the enemy attack bases. How you might ask??? By warping off to their planetary system and zapping their bases on your own strafing runs like they do to your planets. Destroying all of their bases is the only way to win the game and stop the continuous waves of enemy ships. Sound interesting???? Well, the story sound good. If I somehow or other messed up the story, I am sorry. One good part of a good game is not how good the documentation is, but how it plays. I hate reading documentation. If I get a game, I want to play it not read. Come on Jim, continue. Alright...

So that the game in a nutshell, what do I think??? How does it compare???? I like it. If there is one thing that I don't like, it is if you don't learn how to destroy the enemy bases, there is no end. The ships keep coming. This could be good or bad. I have not finished it, but it is one of the only games that I play these days on my 800 and 800XL. Compare it to Star Raiders???? Star Raiders is a classic and not likely to be outdone. The kills

are tougher in Star Raiders II. The ships are more intelligent in Star Raiders II. The graphics are better in Star Raiders II. But.... If someone wanted a truthful answer, I think I like Star Raiders story better. Will I play II??? You bet, probably more these days than Star Raiders. I have to beat this thing someday. Should you buy it???? You bet, if you can find it. I waited two months for my copy and haven't seen another copy since. They are hard to come by. To conclude, it isn't Star Raiders, but it is Star Raiders II and should be judged on its own merits and not on its predecessor. Star Raiders II is a very good and enjoyable game and should be added to all software game collections.

So what's next up. How about Super Boulderdash!!!! Yes, next month I will look at the original and its sequel. How do they fare??? Until next month, see you at the SPACE meeting.

MAST ON-LINE (Continued From next page)

The article is "The Myth of ST Superiority" by Sheldon Leemon, one of the contributors to Compute's ST. This article has created a lot of talk on the BBS's since it's publication in the Computer Shopper. Now you can judge for yourself. OSS.NEWS - Software Press Release. This is press release from OSS announcing their new BAREWARE line of software. If you are an OSS fan or not, read about the release of their first two products in the BAREWARE line only available by mail.

Well, that is or what will be on-line by the time that you read this. It also you an idea of what will probably be posted in the future. If you like this idea and find it useful, let me know. I have my hands in quite a bit with the disk library, running the MAST group, helping to run the SPACE group, writing newsletter articles, and starting new projects. So if you like it, it will continue. If I hear no response, it will probably fade away and I will download some of this information for my own use.

Coming this month new on MAST On-Line: Hot news from the COMDEX software show, the latest updates of new ST software, and the latest news on this month's disk of the month. If I can get my act in gear and get the disk finalized before Thursday night, I will try and post a quick update on what is on this month's disk of the month for the MAST meeting that Friday. This is my goal.

Finally, MAST On-Line is for your questions and hopefully answers. I call up both boards at least once every two days if not more often so if you have a question or comment, leave me mail. I love mail. And I will get back to you. MAST is more than my opinion and Bob's opinion. MAST wants and needs your input so if you have any comments leave them publicly or privately and I will get back to you.

So that is MAST On-Line. If it continues, I will continue this column telling you what is new, what is coming, and if I get any mail, what you want or have questions about. This column would be similar to ANTIC's old on-line column or ANALOG's new on-line column. Until the meeting, happy modeming.

MAST On-Line
By Jim Schulz

Okay, Jim, what is this???? Didn't you tell us about this last month and when I called nothing was there??? Another false notice,huh???? Well.... Ok, listen up. MAST On-Line is my futile attempt to support and communicate to the MAST members between meetings. I get quite a bit of information in my research and reading for this newsletter and the MAST meeting so I hope that I can pass some of that information on to you. MAST On-Line currently has both a message base and a download section on both Mindtools/STAG and LR Data BBSes. Neither of these boards are financially supported by MAST, but both boards have given some space to the MAST group for this effort. Now the phone numbers: Mindtools/STAG542-8980
LR Data777-6376

Now for what's out there: not much as I write this. Since Mindtools was up first, they have most of the stuff so far. LR Data currently has nothing. But as soon as I finish writing my contribution to the newsletter, both boards should be reasonably full of ST and MAST news. Here is a list of the new or everything for this month:

MAST Disk Library Listings - This is a complete description of all of the disks of the month by month and a copy of the Todd Burkey's DISKTOP disk management program and the data base for all of the disks of the month through October. All of the individual files will be posted as well as an ARC file of everything.

ST Software List - Some brave soul has taken on the job of keeping a complete list of all available software for the ST. This is currently updated monthly as well as a list of all new entries. This has appeared on the last two disks of the month, but from now on will appear here. I will post the new list of all available software each month as well as the list of new software from the previous month. The new software list will continue to appear in the disk of the month.

San Jose Show News, and Atari Stock News - The latest news.... These are four files that tell you about what new ST software and hardware that was shown at the Atari sponsored San Jose Show and the latest information about Atari's public stock offering.

ARCSHELL.RSC - Updates to disk of the month. Right after the meeting, this file was uploaded to Delphi which lets the ARCSHELL program from last month's disk work better on a monochrome system. Download it if it is useful, bring me your last month's disk for exchange, or buy November's utilities disk if you want this file.

HDX.ARC, README.HDX - This is the latest version of the Atari hard disk driver which fixes the bug if you specify disk sections anything other than the defaults. Since the usefulness of this is so limited, I figure this is the best way to get it out. Download the README.HDX file to see if you need it.

MAC Emulator News - This is two files. The first file appeared on last month's disk of the month and describes what the MAC emulator now called MAGIC SAC can do for you. The second article is a very good conference text article of an on-line conference done with David Small, the author of MAGIC SAC. This will also appear on this month's disk of the month.

Amiga vs. ST - This is the article that I talked about at last month's meeting. It doesn't belong on the disk of the month, but it is very good reading and a good conversation piece for ST owners.

News from the Co-Chair
By Jim Schulz

It's that time and again and time for the latest news and comments from yours truly from the MAST chair. I have quite a bit this month so I hope I don't get too long winded. First off before the news, some club business. We need a secretary. Bob has talked about it at the last two meetings and it would be nice to tell others who miss the meeting what the heck happened. All the secretary has to do is show up at all of the meeting and write something up for each month's newsletter. The secretary does not have to write anything else or have to write some of the volume that Bob or I write. All we need is something. If nothing else to tell new members what to expect and tell current members what they missed by not showing up. And maybe start some discussions on topics discussed. The article can be mailed to me or Bob on disk, or uploaded to either Mindtools or LR Data's BBS. If uploaded, just mail me a message and I will get it to the newsletter editor. You write it, and I will worry about the delivery. If you are interested, contact me or Bob. We will be glad to hear from you.

Next up, memberships. I don't want to digress on this again, but if you enjoy the club meetings, enjoy the newsletter, or use and enjoy the disk of the month, please join MAST. I and the other officers can tell best how MAST is doing by the number of registered members. If you are reading this from a mailed newsletter, please disregard this plea. One note, though, for registered members. Could you please check the list of current MAST members at the next meeting??? Bruce should have it up front. Currently, unless you recently joined, SPACE members are SPACE members and MAST members are MAST members. I would like to know about those of you who have switched groups or who now attend both groups. I feel on real shaky ground talking about nonregistered members when I don't actually know how many members MAST has. So check the list so that we can get an accurate count. And please join if you are not a member.

Next up, can a sig have a sig???? What???? I have been given permission by the executive board to do a prospectus on starting a MAST programmers sig. My plan for this group would be that I would run it. It would be very informal. Meetings would be held someplace free and would meet either the Monday, Tuesday or Wednesday following the MAST meeting each month. The meeting would center around programming the ST and would be a lot more technical than the general MAST meeting. Demos would include software development products, compilers, and the like. A general programming topic could also be discussed at each meeting. Ultimately, I would like to break up into two or three groups at the end of the meeting and talk C, Pascal, and possibly Modula. This meeting would be an extension of the MAST meeting, not a repetition of the same news. The meeting time would also allow those who can't attend MAST on Fridays to join MAST and participate. Disk of the month would also be sold for those interested. Well, that is my plan. Now for the kicker, I do not want to start such a group and invest more of my time unless there is sufficient interest. Reason for the prospectus. Nothing that I said above is cast in stone except for the focus of the group on programming and meeting time of the meeting. Initial reaction has been mixed at best so I do not want proceed unless there is interest. If it is a go, meetings would start after the first of the year. If you are interested, mail me a message on either of the MAST On-Line boards telling me your name, which day you would like to meet, and if you are currently a MAST member. I will also have a signup sheet at the next meeting. I want at least 15 committed members before I continue work on this new sig. I, personally, am very pleased at number of experienced programmers

who are associated with MAST, but currently we have nothing specific to offer them. I hope this fills that gap. Please, if you are interested, get in contact me. Bruce told me when I proposed it to him that he has already had four people inquire about such a group before I mentioned. I hope this is a good sign.

Next, MAST On-Line. I really haven't supported this like I should over the last month, but by the time you read this both MAST On-Line sections should be packed. For more information, read this month MAST On-Line update column. Also if you enjoy this benefit of your MAST membership, let me know. If no one uses it or wants it, I will discontinue it. Finally, some confusion has been started about BBSs and MAST. MAST does not have its own BBS. Also MAST does not financially support any BBS. The two MAST On-Line BBSes are run by two private software dealers and have donated the space on their board to MAST. I hope this clears up any confusion.

Next, this month's newsletter. This month, I have renamed Disk Notes to Chuck's Notes. Chuck Purcell donates a lot of his time to support the club rather quietly. One of the things that he does is write descriptions of things that he finds interesting or things that I have find interesting or get asked about. Well, that is Chuck's Notes. This month, Chuck talks about OSS Pascal and parameters for the compiler and linker as well as some notes on the editor. Other news, I did not find time this month to tackle my VT100 emulator comparison that I promised. Four days of newsletter writing and two more days of planning gets to be a little long. In addition, a new version of FLASH! is out which is more VT100 compatible(see below) so I hope to get that and include that in the analysis as well. One comment, though, the UNITERM program on this month's disk of the month looks like a clear winner in early returns. He tested it using this VT100 tester program before releasing the program into public domain. See the DOM article for more info. Expect this comparison next month.

Finally, if we can get a volunteer, I would like to see a survey done of our members to see how Bob and I are doing at addressing your needs. The membership is always so quiet so unless you speak up, we will assume things are okay. I would also like to know what you like and dislike about the disk of the month and what you want to see and what you don't want to see on the disk of the month. So far, I organize by my own tastes since no one seems to have any opinion. If you are interested in putting together such a survey, let Bob or I know and we will give some suggestions and maybe some old SPACE surveys to get you started.

Now it's time for the news..... First off, business comings and goings. Rumors has it that Shanner will be going out of business any day now. Shanner is the manufacturer of a third-party disk driver, and distributor of a number of pieces of software including the Clock Card, Shanner Key, and Macrodesk. It seems from current reports that Shanner wasted all of their money on three color display ads for a disk folder and ran out of money for manufacturing and administration. Print Shop wins over Printmaster in court. Broderbund, makers of Print Shop, sued Unison, makers of Printmaster, over visually copying their Print Shop program. Broderbund won the case and if they have their way will soon be off the market. Unison is appealing the case. In unrelated news, Broderbund has received STs from Atari as well as Atari printers and are currently in their final stages of development of a version of Print Shop for the ST. This version of Print Shop will include all of the standard Print Shop features along with print preview and picture save capabilities. Sound familiar. One of our favorite computers has recently shown up on television in one of the strangest places. On a cable television shopping

program last month, Telshop, I saw them selling of all things, an Amiga with a couple pieces of software. This might not seem so strange, but most of the stuff sold on this program are closeout and discontinued merchandise. Is this an omen of things to come??? Speaking of television, Atari itself is getting back into television. Atari is starting to test market commercials for Christmas. The first two commercials for the 65XE and the 7800 are already being shown in Boston and Philadelphia. Based on their response, they will go nationwide. An ST commercial is also in the works. To give you an idea of what the commercials sound like this is the slogan from the 65XE commercial. "The 65XE blows away the 64C..... for under \$100." The commercial is supposedly very well done and very funny. Something new to look forward to from Atari.

Finally, Atari has announced educational discounts of 20% off the retail prices for all ST computers until December 31, 1986. This applies to both students and teachers. Ask your local dealer for more information. Well, that's it for the news.....

Oh, no!!!! I forgot two more items. First, ANALOG has announced that starting with the January issue, ANALOG will publish ANALOG for 8 bit stuff and ST-LOG for ST stuff. ST-LOG will be published monthly and sell for the same prices as ANALOG. If you subscribe to ANALOG, you will get the first three months of ST-LOG for free and then you must make a decision on what magazine you want. If you want both, you send them \$1.50 for each month left in your subscription for the second magazine. A very nice way of introducing a new magazine. Now, what will ANTIC do with START??? Rumor has it that after the December quarterly issue of START, START will go bimonthly. We will see. The first issue of ST-LOG will be available the first week of December. Secondly, the infamous GDOS will be released any day now, but with some strange conditions. If you want to license it for resale with your product, it will cost you \$500. Atari will not give it to developers or machine owners. You have to buy it with a number of premade fonts whenever Atari finishes its package. This might be a long time coming based on past experience with Atari sold software. Next, any program written in OSS Pascal will not work with it. It just hangs. This is because of a bug in OSS Pascal which has supposedly been fixed, but not released. It don't look good. For those of you who are wondering what GDOS is, GDOS is a patch to the operating system as a file in your AUTO directory that allows you use different fonts with the ST and different printers other than Epsoms. It is currently used in Easy-Draw and Degas Elite and soon to be used in Paper Clip Elite and Microsoft Word. That's it now for the news, now on to software.

Software..... Boy, has the software come out this last month. Let's see. First of all, we has the British invasion. All sorts of software held up in customs came out at the same time. The programs include Starglider, Deep Space, ST Karate, ST Defender, and Space Station. Also new in the stores about that time was World Games from Epyx. The second round of software has just finished rolling in. This round included Degas Elite, Crystal, Kermit for Flash! and Flight Simulator. Another program from Epyx was also released which is a motorcycle version of Pole Position. Of these programs, the ones that look real interesting to me are Starglider, Deep Space, Degas Elite, and Flight Simulator. More on these in my pick of the month.

COMDEX is coming and will probably be done by the time that you read this. Here are some things that I have picked up about possible happenings at COMDEX. First off, Atari will not show any laser writers, AMY music chips, or 2 or 4 meg STs. Atari has stated that they will not show the 2 or 4 meg ST or talk about it until it gets FCC approval. With all the noshows, Atari still

says that it has a lot of good surprises for ST owners. More strange news on the happenings at Atari at the next meeting. Also a math co-processor cartridge will be shown. This cartridge will use the National 32000 chip and only speed up simple math (+,-,*,/) operations. Expect a lot of new ST announcements and maybe even a new computer which emulates, get this, an ST. For more of the latest COMDEX news, come to the next MAST meeting or check for the latest news on MAST On-Line.

Okay, time for updates. This month, it's my favorite terminal program FLASH!. Flash! has been upgraded to 1.1 and here are some of the changes. First off, Flash! now supports baud rates up to 19200 cleanly. It is now more VT100 compatible, now supporting all VT100 codes except for underlining. Control-W now wipes the capture buffer. Baud rates can be set for each phone number individually. And 48-line mode is supported for hi-res monitors. I do not have the update, but I will be sending for it. This information is from another user group newsletter. For an update to 1.1, send \$5.00 and your original disk to Antic Software/524 Second Street/San Francisco, CA 94107. Finally, it's that time again..... Tah!!! Tah!!!!. Yes, it's time for Jim's picks of the month. This month, it is almost too easy. First off, if you like a good shoot 'em game, you must buy Starglider. This game has to be seen to be believed. Music, digitized voices, and the 3-D effects. This is a must buy for your game collection. For those of you interested more in drawing, Degas Elite is for you. Tom Hudson has done it again. Degas Elite allows you to have up to 6 pictures in memory at one time, multiple fonts, automatically converts any picture as it is loaded, blending, and a whole lot more. I have only seen this program demoed so if you like Degas, you'll love Degas Elite. Finally, for those of you who need a battery backed up clock on your ST, how about the clock cartridge from Bigfoot Systems. Otto from the Twin Cities designed the clock and software and it runs beautifully. ANTIC reviewed it this month and also loved it. Also rumor has it that he has some new add-ons planned for the clock cartridge in the future. I have used it now since the last MAST meeting and it runs flawlessly and is very well made. If you need a clock cartridge, check out the one from Bigfoot Systems at a St dealer near you. One more program that might qualify for next month is Flight Simulator. I just saw for the first time tonight and it looks great as well as offering a modem two player option. Watch for a demo at the next meeting. Well, I was a little long-winded again this month, but that is it for this month. This article took two days to write this month and I think that is more than enough. So I will see you at the next MAST meeting for November for the hottest news, rumors, demos, and, of course, public domain software. See you there.

DOM NEWS (Continued from Next Page)

ST. All software programs are checked by me and documented in a README file in each directory so you are sure you get something that works.

For those who cannot make the meeting and still would like the DOM, I will mail them to you within one week of the meeting for the standard \$6.00 plus \$1.00 for postage and handling for the first six disks and each six disks thereafter or \$0.50 for one disk. My address is:

3264 Welcome Avenue North

Crystal, MN 55422

Also, if I blow it and don't have disk that you want at the meeting, I will mail it to you free within one week of the MAST meeting.

So that is it for November's disks of the month. See you at the MAST meeting with best selection of public domain software around with more always coming.

Disk of the Month - November

By Jim Schulz

Yes, it's that time again and time for another disk of the month. First off, last month's mystery disk was a mouse driven version of HACK, the multi level dungeon game. This version is very fast and allows you to play any of six or eight different characters. Very nicely done. Also last month was the arrival of the first documentation disk. This was very well received so it will continue and be updated monthly. For \$3.00, it is not a bad deal. Also last month on the utilities disk was a very nice shell program for ARC. The only problem was that it didn't run very well on monochrome monitors. This has been fixed by a new resource file (.RSC). You can get this file by either swapping utility disks at the next meeting, buying the November utility disk, or downloading the new resource file from MAST On-Line. The choice is yours. Well, I am finally going to start reorganizing the disk of the month this month. Starting this month, the disk will be numbered starting with #71. Previous disks will be backnumbered in the months to come. The disk library will be divided up into four sections: normal disks of the month, developer disks, disk of the month documentation disks, and starter disks. Each of these sets will be individually numbered starting at #1. All disks will also be subtitled with the month that the disk was prepared in. This way of organizing disks should make life a lot more easier to buy disks and for me to maintain them.

Next, starter disks. Every month, a new ST owner comes and asks which disk has the best modem program or the best ramdisk program or games. So I am going to put together a set of Best of disks with the best of each category of programs. This set will include a utility disk, application disk, communication disk, one or two game disks, and an information/demo disk. These disks will be updated about every four months to stay current with the best programs in each category. Then when a new owner asks, I can direct him to these disks to start out. Now for your participation, I need to know which programs you like best and find most useful. Please write them down and give them to me at the meeting or mail me a list on the MAST On-Line BBSes. I have my favorites, but I often miss some of them as I am busily putting together disks so please help. These disks should be ready for the January meeting.

Next, prices. The prices of the documentation disk starting this month has been dropped to \$2.00 to allow you to always keep up to date with your documentation on the disk of the month. Now documentation for the price of the disk. Also \$2.00 is the price for updates to disks along with your original disk. Oftentimes after I put out a special disk, a minor update comes along with one or two new files. Now I will update that disk and give you a chance to keep up to date for \$2.00. New disks coming in this category also include a Degas font and printer driver disk and a First Word printer driver/utility disk. Either I see a new printer driver or a font each month, so now I can give you these without cluttering up every disk of the month with the same or updated versions of printer drivers. Watch for these as well as a couple of other updates in December and January.

Well, that's it for this month.... But wait, I forgot to tell you what is the latest and greatest software for this month so here goes:

CP/M Emulator - Yes, Atari has finally released it. Off the BBSes, it comes as one huge ARC file to divide up and make a CP/M boot disk and a CP/M disk. Well, I will do that for you. This month, I will put together two CP/M emulator disks, first the boot disk with all of the CP/M documentation and second the CP/M disk itself full of CP/M utilities. This month, I will distribute the full Atari release. Next month, I will

distribute a second utility disk based on suggestions from GENIE CP/M group to the question: What else do I need??? After that it's up to you. The CP/M public domain is probably the largest available so I am not going to download everything. If someone has access to CP/M stuff and would like to donate it, I will pass it along. I will continue to look for CP/M stuff in the hope if there is enough interest to have a new CP/M disk each month.

Speech Synthesizer - Someone has written a speech program. You type in a sentence, a word or a phrase and the ST will repeat it. I have not yet tried this, but everyone who has loves it. Also I have instructions on how to build you own speech synthesizer box. Maybe one of our hardware hackers can build this and demo it in December.

Chess - This is a chess program in German, yes German, that plays a pretty mean game of chess. It will only run in monochrome. It also includes a character editor to change the pieces to your own liking. This is a very nice chess game.

CAD-3D Demos - These are two more CAD-3D animation demos, one is enhanced single sided and the other is double sided. The double sided demo will run on a 1 meg machine. The single sided demo is called hollow. I can't remember the name of the double sided demo. After this, I have one more left for next year. Hollow will be demoed at the meeting.

Regent Base - I have a full running demo with no save of Regent Base, the new GEM-based database program. I have not played with this program too much, but from first impressions, the interface looks real impressive. Try it before you buy it.

Music - I have two sets of music programs this month. First I have a very nice MIDI/non-MIDI music player program which is a demo of a MIDI music program. I also have series of music programs that you start and play while you do other things.

Clocks - Yes, Chuck is at it again. Chuck Purcell just got back from Europe and he is back at it to produce a better cornerclock program. You will see what he has on this month's disk.

FASTER #1 - This might seem strange, but this is a disk of the month from Canada. This group puts out a bilingual French and English disk with a menu packed full of stuff. I have read alot about this disk and everyone says that it is the best disk of the month for the ST. I have not yet downloaded it, but this month we will have #1 and next month #2.

SHOWPIC2.PRQ - This is the next picture viewing program from Tom Hudson. This program has a lot of features to view old pictures as well as true. You can adjust the disk drive for pictures, the speed of the picture loading, and display of a file name. Also from Tom Hudson is a Degas font conversion program for GDOS.

UNITERM - This is a terminal program that has to be seen to be believed. This is a VT100 emulator and a Tek4010 emulator terminal program. For VT100s, it supports 128 characters for 132 column mode, double width characters on monochrome, and just about everything else. It has been fully checked by the author with the VT100 emulator check program. The only things not supported are interlace, autorepeat control, and smooth scroll down. Very nice program. I don't know about the Tek4010 emulation, but it does support text and vector mode. If you have been looking for a good public domain VT100 emulator, this one is it. Well, that is it for this month on our way to 100 disks for the first year of MAST. If I have time, it might be 100 disk for the new year. For more up to date information on the DOM, check the MAST On-Line BBSs after Tuesday on the week of the MAST meeting. I might have another two disks lurking yet in the dark.

So far as of last month, we now have 71(count'em) disks of the month after nine months. For information on any of the past disks, see me at the next meeting or purchase the MAST documentation disk for \$2.00. Send \$2.50 if ordering by mail. This documentation disk includes a description of each disk as well as a list of all files on all disks organized using the DISKTOP program.

For those who don't know, MAST has a disk of the month which we charge \$6.00 for which is packed full of public domain software for the

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Notes from Chuck
by Chuck Purcell

Every month I get something from Chuck that he has either uncovered in some foreign magazine or just discovered by hacking through some code. The other day, I asked Chuck if he knew the switches were for the OSS Pascal compiler and linker, if I ever wanted to give up the GEM-based shell. The following is Chuck's response. If you didn't know, the CCD in the Personal Pascal copyright notice relates back to Germany where this version of Pascal was originally written. You see Personal Pascal in Germany is actually ST Pascal and is sold by Atari Germany. With this in mind, I now take you to Chuck's response.
Jim

Personal Pascal Vers. 1.02 2/10/86 Copyright 1986 CCD and OSS, Inc.
Buried treasures within OSS/PASCAL
<PASCALplus von CCD in Test>

Various publications obtained on my recent trip to Germany, et al, indicated that the OSS/PASCAL contains a very attractive command line interface. This facility has been useful to me and may well be useful to you in your programming environment (I use cshell.prg, mostly). CJPurcell,ST.PAUL,MN 55113

EDITOR

EDITOR.PR8.....usage EDIT <filename>[<line>][<column>][<errnum>]]

(my usage) editor filename[...]

KEYPAD usage: where ^ signifies simultaneous control-KP operation

^(	-----	^)	-----	^/	-----	^*	-----
back space:clr		tab		left side		next line	
^7	-----	^8	-----	^9	-----	^.	-----
paste copy buff.		down one		delete current		bell	
^4	-----	^5	-----	^6	-----	^+	-----
delete CR/LF sp.		bell		bell		bell	
^1	-----	^2	-----	^3	-----	^Enter	-----
hide cursor		right cursor		left cursor		:	
^0	-----	^.	-----	^	-----	carriage	
right side		line split		:		return	
				:			
				:			

Other keystrokes: HELP is available from help key(not noted in my manual):
HELP yields: COMMAND SUMMARY: Copyright 1986, CCD and OSS, Inc.

Use arrow keys for movement

Shift-arrow moves by page, or to beginning or end of line

Control-arrow moves left or right by word

Home	- Beginning of text	+Home	- End of text
Tab	- Move cursor to next tab column		
Backspace	- Delete character left of cursor		
Delete	- Delete character under cursor	^Delete	- Delete word right
Insert	- Toggle insert/replace mode		
F1	- Delete current line	+F1	- APPEND to copy buffer

F2	- Paste delete buffer		
F3	- Find a string		
F4	- Replace a string		
F5	- Find or replace again		
F6	- Auto-indent ON/OFF	+F6	- Backup ON/OFF
F7	- Save text	+F7	- Write copy buffer to file
F8	- Read file into copy buffer		
F9	- Save and compile		
F10	- Save and exit	+F10	- Quit without saving

Hit ESC to continue... See manual for WORDSTAR-like extensions:

^Q	^W	^E	^R	^T	^Y	^U	^I	^D	^P
<-^Q->		up	page up				tab		
^A	^S	^D	^F	^G	^H	^J	^K	^L	
<word	<-	->	word>						
	^Z	^X	^C	^V	^B	^N	^M		
		dn.	page dn						
		^Q^C	end						

COMPILER

ST PASCAL/68000 V 1.3 by J.Lohse,copyright 1985 by CCD Walluf

COMPILER.PR8...usage PASCAL filename(<OPTION>[<listfile>])

(my usage) compiler fname /LIST /CHECK /GEM ... >listing

options:	/CLEAR	form clear before use code	?
	/CHECK	range \$P \$R \$T ?	?
	/NOCHECK	" " " " ?	?
	/DEBUG	form debug code	?
	/PAUSE	?	?
	/GEM	form GEM program (instead of TOS)	?
	/UGEM	use GEM window for report(not very useful)	?
	/LIST	list to screen [>listfile]	?
	/NOCODE	do not form code result	?

OPT not yet verified, but probably best in-line in source, anyway, see manual.

where:	\$C	-+=	sets clear	\$D	-+=	sets debug
	\$E	-+=	sets external access	\$I	fn	sets include filename(s?)
	\$M	-+=	sets modular compilation	\$P	-+=	pointer range checking
	\$R	-+=	range checking	\$S	n	sets space for stack&heap on TOS
	\$T	-+=		\$U	n	sets user memory for GEM

The final display is useful for production programmers, size statistics,etc.

LINKER

FASTLINK V 1.1 - fast GEMDOS linker by J.Lohse,copyright 1985 by CCD wallruf

LINKER.PR8...usage FASTLINK [file=] file [,file....]

(my usage) linker fname.prg=fname.o,pasgem,paslib.... tested.
fname.tos=fname.o,pasgem,paslib....

German batch command segment: fastlink %1,paslib,peekpoke
rm % 1.0 not tested..

Well, that's Chuck response. Now if hate GEM, you can throw the shell away and run it from Micro C-Shell or any of the other shells available. As a side note, soon after OSS released Personal Pascal, they received a number of responses to do exactly what Chuck has documented. OSS was supposedly dumbfounded because they figured everyone would want to use the GEM interface.

I guess that they were wrong. What we have for next month, only Chuck knows. Chuck is now into cornerclocks and caps lock indicators and you will be some of his work on this month's disk of the month. Chuck is also working on a quick reference guide to the help based Emacs, so expect that also in the months ahead. I would once again like to thank Chuck for his contribution and encourage others to do likewise. Until next month, happy computing.

Dave Small 10/4/1986
Data Pacific, Inc.
609 East Speer Boulevard
Denver, Colorado 80203
(303) 733-8158

Magic Sac 1: \$129 suggested retail
Magic Sac Plus: \$149 suggested retail

The Magic Sac is a product for the Atari 520ST and 1040ST computers. It allows those computers to use Macintosh software.

The Magic Sac comes in two flavors. We wanted an inexpensive product for people who don't have a lot of money, so we offer the Magic Sac 1. This is the basic version. It includes the cartridge, an ST disk with transfer and other software, a Macintosh disk with a transfer program, and the manual.

The Magic Sac Plus is the more expensive product. It includes an onboard clock-calendar with battery to keep time. (This clock may be used both from TOS, the ST operating system, and from the Mac operating system).

Both products include a transfer cable to move software from the Mac to the ST; more on this in a moment.

Optional product: An ImageWriter cable, to run the Apple ImageWriter printer from the ST.

A product we are working on, but have not released, is a Mac-compatible disk drive for the ST. Plan on it showing up around January. No pricing yet.

Either product may be ordered directly from us. Dealers are only receiving the Magic Sac Plus.

Two notes --

Once upon a time, the Magic Sac was known as the "MacCartridge". However, the word "Mac" is trademarked by Apple Computer, which we were unaware of when we used the original name. When Apple let us know, we changed it.

The Magic Sac went on sale at the San Jose Atarifest computer show, at a show special of \$99. This was a hacker-only special; we agreed to sell at \$99 if we didn't have to include the transfer cable. The \$99 price doesn't apply anymore. We sold out, by the way, in four hours (kind of a feeding frenzy).

There are many considerations involved here, so I'll cover them one by one.

1) CPU Speed. The Mac generally executes at 5.9 Mhz when running out of RAM, due to memory contention with the video display. The Atari generally runs at 7.9 Mhz all the time. Hence, when you ran Mac software using the Magic Sac, you will see about a 20% speed increase. Benchmarks show 23% improvement in RAM programs. (The Mac's ROM execution speed, though, is 7.9 Mhz, and thus identical).

2) Screen size. The Mac uses a 512 x 442 screen. The Magic Sac uses Atari's monochrome screen, at 640 x 400. Generally, Mac software adapts to the larger screen size and uses

it; for instance, Microsoft Excel gives you that much larger a window into your spreadsheet.

Note that the Sac *only* works with a monochrome display. Someday we may support color on a limited basis -- but, the Mac does not support color and the color screen only has 200 lines of vertical resolution, and that's only half of what is needed.

3) Disk Format. The Mac uses a 400K disk format with a custom "GCR" disk format. The Atari ST uses a standard IBM-format controller chip, the 1772. Hence, you cannot read Mac diskettes in ST drives. Software to be run on the ST must be transferred, via modem cable, before it can be run.

We call the destination disk format, a 400K 1772 format, the "MAGIC" format. It holds the same amount as a Mac disk.

Right now, we don't support a 800K double-sided format, but we're working on that. Remember, the Mac did not have double-sided drives for some time; our basic product is very much like a Mac.

There are several ways to do this:

a) XMODEM the programs across using FreeTerm, MacTEP, or a similar Mac terminal program;

b) Use the supplied disk-copy tool which transfers an entire diskette across a serial cable, from a Mac to an ST;

c) We are working on a Mac-compatible disk drive for the ST which will let you directly use Mac disks, but that's not happening until January at a minimum.

d) If a program is copy-protected, you will generally not be able to make a copy of it with the modem program (because of the protection). However, copy protection is pretty much fading away in this industry; thank heavens.

4) ROMS. The Magic Sac uses two Mac "Boot ROMS", or "64K ROMS"; these are the "old" ROMS, not the new 128K ROMS. It does not work with the 128K BOOT ROMS. We do not supply these chips.

The user must supply their own ROMS, and of course, we recommend they obtain the ROMS from a legal source. In our manual, we recommend removing the ROMS from your presently-owned Macintosh, and using the Magic Sac as an upgrade.

Incidentally, the Magic Sac does not work with copies of the Apple ROMS; we don't want to see the Apple code copied or pirated. The Magic Sac software also does extensive checks to prevent a disk-based copy of the ROMS from operating.

5) Memory. The Magic Sac uses some memory for Overhead, and emulates a Mac as follows:

a) 520 ST: 128K or 256K Mac

(Note the 256K Mac was used in-house, but was never officially released; still, it offers performance improvements over the 128K size, particularly in such things as MacPaint or MacWrite.)

b) 1040 ST or 520 with 1 meg upgrade: 128K, 256K, 512K, or 900K Mac

We also offer the "Motivator", a built-in RAMDISK, as an option on the larger memory size. It reads in the entire startup disk (in 16 seconds on the newer versions), then runs off of RAMDISK. This gives very high performance improvement, for instance, the system boot once read in takes around 4 sec, launching MacPaint takes around 3 seconds, and returning to the Finder takes

about 3 seconds. Much better than disk-based speeds. If you're doing a lot of moving between applications, the Motivator makes the task of switching between them much quicker.

One rumour about the product is that it only works on 1 meg machines; while that was true a long time ago, it isn't true now.

6) Compatibility

The Magic Sac offers very good Mac compatibility. The situation is very much like an IBM compatible; there are some programs that will not work, but most stuff does.

There's a logical reason for this. For years, the development system for the Mac was the Lisa machine, which has a different internal architecture. Mac software had to be developed in a machine-independent manner so it would run on both the Lisa and Mac. Hence, there's a great body of machine-independent software out there.

Incidentally, there is a program known as "MacWorks" for the Lisa which lets the Lisa use (a lot of) Mac software; you might consider the Magic Sac as "Macworks" for the Atari ST.

There are several areas we do not offer compatibility in. Programs which break the Mac development rules often do not work-- such things as writing directly to screen memory or addressing the ROMS directly. Fortunately, they won't run on a Lisa, either, so not very many of these programs exist.

We are working on a list of software that does and does not work; many users are also giving us feedback on their results.

Some of the programs that work which you may be familiar with are:

- MacPaint, MacWrite, MacDraw
- Microsoft Basic, Excel
- Aldus' Pagemaker
- Ready-Set-Go
- FreeTerm 1.6, MacTEP

[These names are pretty much all trademarked by their manufacturer.]

7) LaserWriter: we do not presently support the LaserWriter or the Appletalk network. Future support is unknown. We will be looking into it, however.

8) Serial ports: We support access to the serial port, for such things as modem programs, printers, and whatnot. You can, for instance, download files from Compuserve, send stuff back and forth, and whatnot.

The Mac has two serial ports, one more or less assigned to modems, one more or less assigned to printers.

The Atari only has one built-in serial port, so if you have a serial printer and modem, you'll have to resolve which to use at any one time.

Printer output may be sent to the parallel port if you so select.

9) Imagewriter: We support the Apple Imagewriter as the printer of choice. Right now, we don't support other printers, such as the semi-standard Epson printer found on many ST's. We are thinking about supporting it.

Note that some Mac software supports other printers; if you get that software, it'll probably work with your printer as

well. There's some well known Epson drivers, for instance.

You need a special cable to use the Imagewriter (4-wire cable). You can make your own, or get one from us.

10) Hard Disk: Right now, we don't support the Atari or Supra hard disk, but a driver for them isn't far away. It will support the Mac as a full partition on the drive, and should be quite fast, as the hardware performance of the ST drive is impressive indeed. 5 or 10 megabyte partitions should yield good performance.

11) Finder and System. We support revisions of the Finder up to and including 4.1. We don't support the very new Finders (5.1, etc, with HFS) nor Systems. We're looking at that; right now those revisions do not seem very stable to us. (Certainly the new System has gone through many bug fixes since release).

We recommend Finder 1.1g for 128K and 256K systems, and Finder 4.1 for the other system sizes. This matches Apple's recommendation as well. (Finder 4.1 was not really designed to run on a little system.) This system software has been extensively tested and is pretty bug-free.

12) We don't support sound at all. The architectures of the machines are just too different here. Perhaps we will tackle this on a later release.

Some often-asked questions --

At present, the "glue" software, which ties the Mac ROMS to the ST hardware, is 13,600 lines of 68000 assembly code (274 pages). The source code is 388K long. It took Dave Small about a year to write it.

Apple had some objections to the original "MacCartridge" name, and some other issues; we resolved those issues with Apple (for instance, we changed the name) and have heard nothing further.

The very first run of packages had a manufacturing fault that resulting in flakey software performance; we mailed out a software update (a week later) that cured the problems. We are presently supporting Revision 2.00 (10/3/86) of the software.

** Apple, ImageWriter, LaserWriter, MacPaint, MacWrite, MacDraw, MacWorks, and Mac are trademarks of Apple Computer. So is Finder. McIntosh is a trademark of McIntosh Laboratories. PageMaker is a trademark of Aldus. Excel is a trademark of Microsoft. If I forgot any other trademarks, my apologies.

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